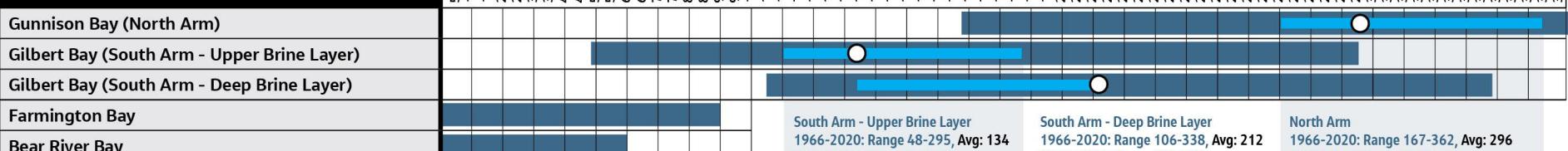


GREAT SALT LAKE SALINITY MATRIX 2021

Historical Salinity Ranges for Lake Elevation > 4193 ft (NVGD 29) (g/L)



South Arm - Upper Brine Layer
1966-2020: Range 48-295, Avg: 134
2011-2020: Range 110-188

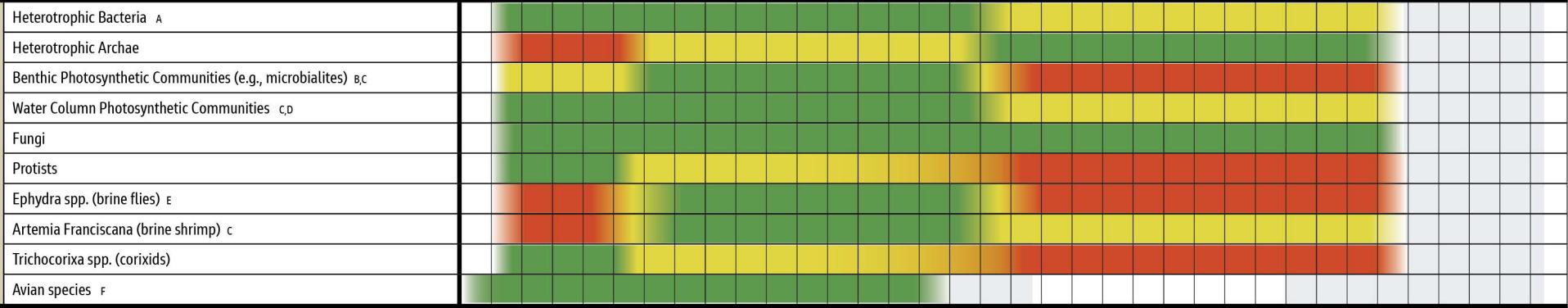
South Arm - Deep Brine Layer
1966-2020: Range 106-338, Avg: 212
2011-2020: Range 134-210

North Arm
1966-2020: Range 167-362, Avg: 296
2011-2020: Range 271-353

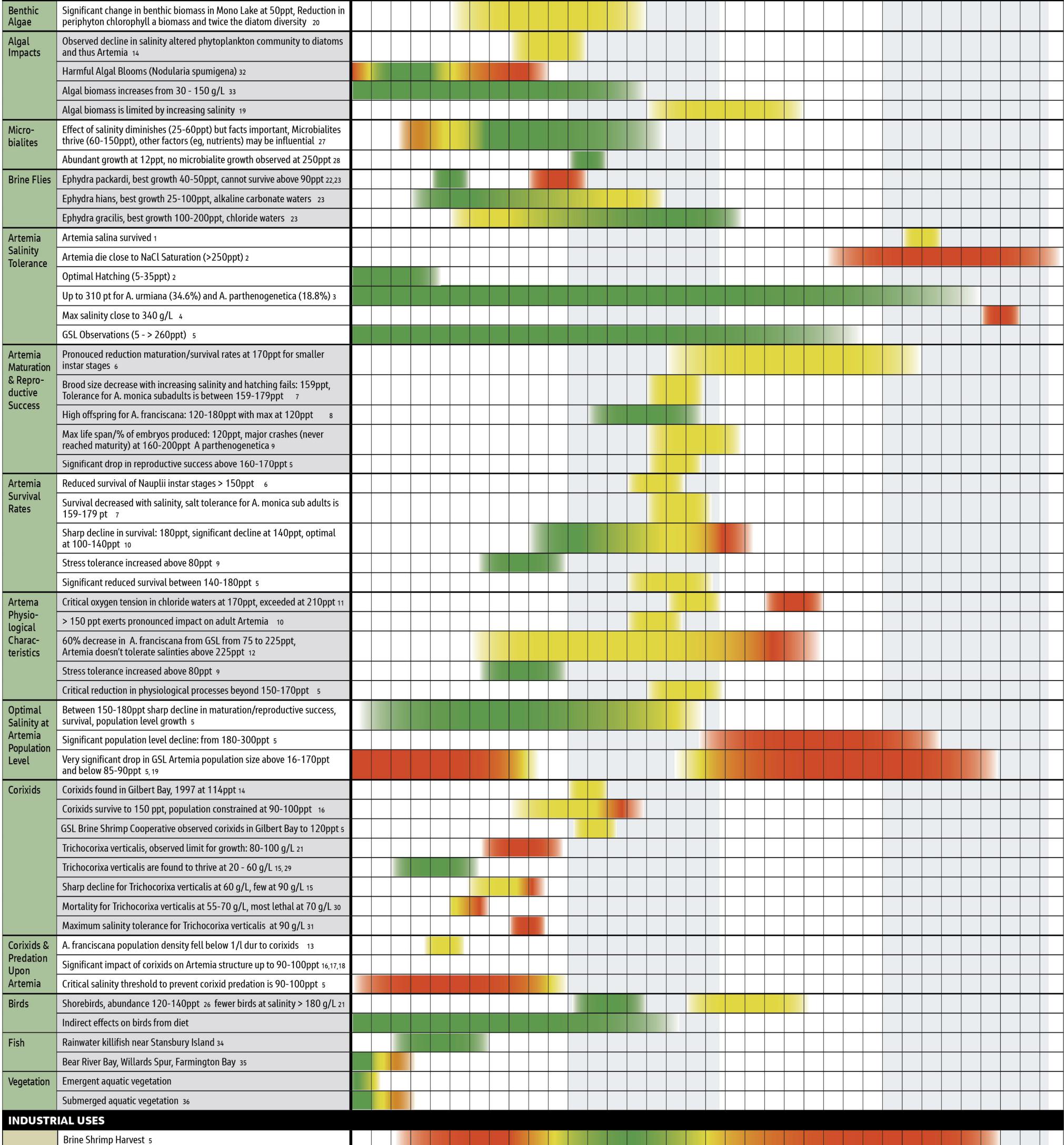
Saturation ← →

ECOSYSTEM SUMMARY

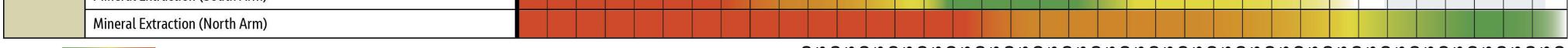
Great Salt Lake Salinity and Impacts on Biology (Baxter 2020)



ECOLOGICAL USES



INDUSTRIAL USES



IDEAL UNFAVORABLE

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360

1 Croghan 1957	8 Browne & Wanagasekera 2000	16 Herbst 2006	24 Por 1980	32 Jacobs 2018	A. Includes potentially harmful cyanobacterial blooms, but only at the 10-50 ppt salinity range	of their food source, which is controlled by salinity. The high salinities provide little in food source, but much in protection (e.g. American White Pelican colony on Gunnison Island), which is tied to lake level and not salinity.
2 Sorgeloos et al., 1986, Lavens and Sorgeloos 1996	9 Abatzopoulos et al 2003	17 DeMeutter et al 2010	25 Harbst 2001	33 Belovsky 2005	B. Microbialite-associated	All data cited in: Baxter, B.K and Butler, J.K., Eds. Great Salt Lake Biology: A Terminal Lake in a Time of Change. Springer, Cham, 2020.
3 Mohammadi et al 2009	10 Triantaphyllidis et al 1995	18 Tanner et al 2014	26 Warnock et al 2002	34 Associated Press 1986	C. Includes both bacterial and eukaryotic photosynthesizers	
4 Gonzalo and Beardmore 2012	11 Decler et al 1980	19 Belovsky et al 2011	27 Anderson et al 2020	35 Penne 2012, Edwards 2021	D. Dunaliella salina and Tetracystis spp are prevalent in the north arm, no evidence of other eukaryotic algae, so diversity is limited.	
5 Bostedt 2012	12 Barnes and Wurtzbaugh 2015	20 Herbst and Blinn 1998	28 Lindsay et al 2017	36 Steward and Kantrud 1972, Kantrud 1990	E. Predation by Trichocorixa spp. at lower salinities	
6 Wear et al. 1986	13 Wurtzbaugh and Berry 1990	21 Herbst 2006	29 Hammer et al 1990	30 Kertz 1979	F. Avian diets are particular to the species and will be tied to the success	
7 Dana and Lenz 1986	14 Stephens 1998	22 Ping 1921	31 Hammer 1986	32 Mellison 2000		
	15 Mellison 2000	23 Herbst 1999				